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(FILE 'HOME' ENTERED AT 11:47:58 ON 27 JUN 2003)

FILE 'REGISTRY' ENTERED AT 11:48:44 ON 27 JUN 2003

E 3-ISOTHIAZOLONE/CN

L1 1 SEA ABB=ON PLU=ON 3-ISOTHIAZOLONE/CN
D L1

FILE 'CAPLUS' ENTERED AT 11:49:44 ON 27 JUN 2003

L2 251 SEA ABB=ON PLU=ON 3-ISOTHIAZOLONE

L3 313 SEA ABB=ON PLU=ON L1

FILE 'REGISTRY' ENTERED AT 11:50:25 ON 27 JUN 2003

E POLYHEXAMETHYLENEBIGUANIDINE/CN

E POLYHEXAMETHYLENEGUANIDINE/CN

L4 1 SEA ABB=ON PLU=ON POLYHEXAMETHYLENEGUANIDINE/CN
D L4

FILE 'CAPLUS' ENTERED AT 11:51:28 ON 27 JUN 2003

L5 92 SEA ABB=ON PLU=ON L4

L6 1 SEA ABB=ON PLU=ON L4 (P) (PHOSPHATE OR PHOSPHORIC) (5A)
SALT

D L6 IBIB KWIC

L7 0 SEA ABB=ON PLU=ON L3 AND L5

L8 51 SEA ABB=ON PLU=ON (L3 OR L5) (P) (ANTIBACTERIAL OR BIOCIDAL
OR BACTERICIDAL OR FUNGICIDAL OR ANTI-PROTOZOAL OR ANTI-ALGAL
OR ANTIMICROBIAL)

L9 4 SEA ABB=ON PLU=ON L8 AND (COMBINATION OR MIXTURE OR SYNERGY
OR ADDITIVE) (P) (L3 OR L5)

L10 10 SEA ABB=ON PLU=ON L8 AND (COMBINATION OR MIXTURE OR SYNERGY
OR ADDITIVE) (P) (ANTIMICROBIAL OR ANTIBACTERIAL OR ANTIFUNGAL
OR BIOCIDAL OR BACTERICIDAL OR ANTI-PROTOZOAL OR ANTI-ALGAL)

D 10 IBIB KWIC 1-

D L8 IBIB 1-

L11 11 SEA ABB=ON PLU=ON (POLYHEXAMETHYLENEGUANIDINE) AND (SALT OR
DERIVATIVE) (P) (PHOSPHATE OR PHOSPHORIC OR PHOSPHOROUS)

D L11 IBIB KWIC 1-

L17 ANSWER 5 OF 19 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1995:618102 CAPLUS

DOCUMENT NUMBER: 123:17526

TITLE: Cosmetic and pharmaceutical compositions containing antimicrobial phosphate esters

INVENTOR(S): Nelson, Dennis George Anthony; Hayes, Jeffrey Charles

PATENT ASSIGNEE(S): Procter and Gamble Co., USA

SOURCE: PCT Int. Appl., 18 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|------|----------|-----------------|----------|
| ----- | ---- | ----- | ----- | ----- |
| WO 9508920 | A1 | 19950406 | WO 1994-US10534 | 19940916 |
| W: CA, CN, JP | | | | |
| RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | |
| EP 721300 | A1 | 19960717 | EP 1994-929236 | 19940916 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE | | | | |
| CN 1132467 | A | 19961002 | CN 1994-193614 | 19940916 |
| JP 09502998 | T2 | 19970325 | JP 1994-510343 | 19940916 |
| PRIORITY APPLN. INFO.: | | | US 1993-129533 | 19930929 |
| | | | WO 1994-US10534 | 19940916 |

OTHER SOURCE(S): MARPAT 123:17526

IT 55-56-1D, **Chlorhexidine, phosphate** esters 67651-57-4

RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(cosmetic and pharmaceutical compns. contg. antimicrobial phosphate esters)

L16 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1998:116050 CAPLUS

DOCUMENT NUMBER: 128:132286

TITLE: Buccal solutions for teeth and mouth care containing
chlorhexidine salts

INVENTOR(S): Cardon, Chris

PATENT ASSIGNEE(S): Cardon, Chris, Belg.

SOURCE: Eur. Pat. Appl., 5 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|------|----------|-----------------|----------|
| ----- | ---- | ----- | ----- | ----- |
| EP 815832 | A2 | 19980107 | EP 1997-870096 | 19970701 |
| EP 815832 | A3 | 19980902 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI | | | | |
| BE 1010402 | A6 | 19980707 | BE 1996-605 | 19960701 |
| PRIORITY APPLN. INFO.: | | | BE 1996-605 | 19960701 |
| AB Buccal solns. for teeth and mouth care contg. chlorhexidine salts , zinc chloride, phosphates and fluorides are claimed (no data). | | | | |

WEST Search History

DATE: Friday, June 27, 2003

| <u>Set Name</u> | <u>Query</u> | <u>Hit Count</u> | <u>Set Name</u> |
|-----------------|---|------------------|-----------------|
| side by side | | | result set |
| | <i>DB=USPT,PGPB,JPAB,EPAB,DWPI; PLUR=YES; OP=OR</i> | | |
| L11 | (polyhexamethyleneguanidine) same (salt or derivative) same (phosphoric or phosphate or pohosphonate or phosphorus) | 0 | L11 |
| L10 | (polyhexamethyleneguanidine or phmb or polyhexamethylenebiguanidine) same (salt or derivative) same (phosphoric or phosphate or pohosphonate or phosphorus) | 12 | L10 |
| L9 | polyhexamethyleneguanidine same polyhexamethylenebiguanidine | 1 | L9 |
| L8 | polyhexamthyleneguanidine | 0 | L8 |
| L7 | polyhexamthyleneguanidine same polyhexamethylenebiguanidine | 0 | L7 |
| L6 | (polyhexamthyleneguanidine or phmb or polyhexamethylenebiguanidine) same (salt or derivative) same (phosphoric or phosphate or pohosphonate or phosphorus) | 12 | L6 |
| L5 | (polyhexamthyleneguanidine or phmb or polyhexamethylenebiguanidine) same (phosphate or salt or derivative or chloride or gluconate or ester) | 159 | L5 |
| L4 | (polyhexamthyleneguanidine or polyhexamethylenebiguanidine) same (phosphate or salt or derivative or chloride or gluconate or ester) | 15 | L4 |
| L3 | (polyhexamthyleneguanidine or hexamethylenebiguanidine adj5 polymer) same (phosphate or salt or derivative or chloride or gluconate or ester) | 0 | L3 |
| L2 | (polyhexamthyleneguanidine or polyhexamethylenebiguanidine) adj5 (phosphate or salt or derivative or chloride or gluconate or ester) | 4 | L2 |
| L1 | polyhexamthylene adj5 (phosphate or salt or derivative or chloride or gluconate or ester) | 0 | L1 |

END OF SEARCH HISTORY

L8 ANSWER 19 OF 51 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:674642 CAPLUS

DOCUMENT NUMBER: 133:223537

TITLE: Antibacterial resin compositions

INVENTOR(S): Park, Heung-soo; Lee, Hyung-bum; Jung, Ho-jin

PATENT ASSIGNEE(S): Korea Chemical Co., Ltd., S. Korea

SOURCE: Repub. Korea, No pp. given

CODEN: KRXXFC

DOCUMENT TYPE: Patent

LANGUAGE: Korean

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|----------|
| ----- | ---- | ----- | ----- | ----- |
| KR 9704205 | B1 | 19970326 | KR 1992-27237 | 19921231 |
| PRIORITY APPLN. INFO.: | | | KR 1992-27237 | 1992123 |

L8 ANSWER 27 OF 51 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1999:250583 CAPLUS

DOCUMENT NUMBER: 130:321888

TITLE: Antibacterial and antifungal tatami mats and sheets
for underlays

INVENTOR(S): Funae, Haruyoshi; Nakamura, Munetomo; Tsubakii, Yasuo

PATENT ASSIGNEE(S): Mitsubishi Paper Mills, Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|----------|
| ----- | ---- | ----- | ----- | ----- |
| JP 11107501 | A2 | 19990420 | JP 1997-271200 | 19971003 |
| PRIORITY APPLN. INFO.: | | | JP 1997-271200 | 19971003 |

L8 ANSWER 29 OF 51 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1998:214277 CAPLUS

DOCUMENT NUMBER: 128:286176

TITLE: Method for enhancing biocidal activity

INVENTOR(S): Wright, J. Barry; Michalopoulos, Daniel

PATENT ASSIGNEE(S): BetzDearborn Inc., USA

SOURCE: U.S., 8 pp., Cont.-in-part of U.S. 5,607,597.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|-------------|
| US 5736056 | A | 19980407 | US 1997-783683 | 19970115 |
| US 5607597 | A | 19970304 | US 1995-431338 | 19950428 |
| CA 2171235 | AA | 19961029 | CA 1996-2171235 | 19960307 |
| ES 2156613 | T3 | 20010701 | ES 1996-301835 | 19960318 |
| NO 9601550 | A | 19961029 | NO 1996-1550 | 19960419 |
| WO 9831638 | A1 | 19980723 | WO 1997-US19741 | 19971030 |
| W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| AU 9852419 | A1 | 19980807 | AU 1998-52419 | 19971030 |
| AU 725801 | B2 | 20001019 | | |
| EP 904252 | A1 | 19990331 | EP 1997-947306 | 19971030 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, LU, NL, SE, IE, FI | | | | |
| JP 2000507158 | T2 | 20000613 | JP 1998-534315 | 19971030 |
| ZA 9710181 | A | 19980528 | ZA 1997-10181 | 19971112 |
| NO 9804181 | A | 19980915 | NO 1998-4181 | 19980911 |
| PRIORITY APPLN. INFO.: | | | US 1995-431338 | A2 19950428 |
| | | | US 1997-783683 | A 19970115 |
| | | | WO 1997-US19741 | W 19971030 |

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 1 OF 11 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2003:99729 CAPLUS
TITLE: Water-diluting composition for bactericidal covers
INVENTOR(S): Lipovich, V. G.; Lifanov, E. V.; Sarylova, M. E.;
Lipovich, T. V.
PATENT ASSIGNEE(S): Petrochenko, Aleksandr Anatol'evich, Russia
SOURCE: Russ., No pp. given
CODEN: RUXXE7
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|----------|-----------------|----------|
| RU 2189999 | C2 | 20020927 | RU 1998-109097 | 19980514 |

PRIORITY APPLN. INFO.: RU 1998-109097 19980514

AB FIELD: paint and varnish industry. SUBSTANCE: invention relates to prepg. a bactericidal cover that involves the use a bactericidal component on the base, for example, water-emulsion dyes, water glass or slaked lime. Invention relates to a water-dilg. compn. for bactericidal covers of articles made of ceramics, concrete, brick, stucco and other materials in air medium comprising a water-dilg. dye and **derivs.** of **polyhexamethyleneguanidine** as a bactericidal component. A water-dilg. compn. comprises **derivs.** of **polyhexamethyleneguanidine** as a bactericidal component of the general formula: where R is a base, chloride, **phosphate**; n = 2-60 in the following ratio of components, mas. p. p. : **derivs.** of **polyhexamethyleneguanidine**, 0.5-9; water-dilg. dye, 91-99.5. Invention provides the development of a cover with resistant bactericidal properties and showing the broad spectrum of biocide properties and safety for humans. Invention is used as bactericidal covers for industrial, stores, public, medicinal, residential compartments and constructions, in agriculture and different branches of food industry. EFFECT: improved properties of compn. 3 tbl.

L11 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:650477 CAPLUS
DOCUMENT NUMBER: 138:124249
TITLE: Polyalkyleneguanidine salt-containing disinfecting detergents
INVENTOR(S): Gembitskii, P. A.; Efimov, K. M.
PATENT ASSIGNEE(S): Regional'naya Obshchestvennaya Organizatsiya - Institut Ekologo-Tekhnologicheskikh Problem, Russia
SOURCE: Russ., No pp. given
CODEN: RUXXE7
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|----------|-----------------|----------|
| RU 2177499 | C1 | 20011227 | RU 2000-120018 | 20000728 |

PRIORITY APPLN. INFO.: RU 2000-120018 20000728

AB A disinfecting detergent comprises a disinfectant, such as chloride or phosphate of **polyhexamethyleneguanidine** or phosphate of poly(4,9-dioxadodecanguanidine) (10-20), a mixt. of a nonionic surfactant (ethoxylated alcs.) and an ionic surfactant (sodium alkylbenzenesulfonate) (10-15%) and water, to the balance. The disinfecting detergents can be used in medicine, veterinary, food industry and for domestic purposes. Thus, a disinfecting detergent comprising **polyhexamethyleneguanidine***
**** phosphate (15%) and a surfactant mixt. (15%) of Neonol 9-10 and**

Sulfanol was produced.

IT 57029-18-2 89697-78-9, ***Polyhexamethyleneguanidine
phosphate 478920-03-5

RL: POF (Polymer in formulation); TEM (Technical or engineered material
use); USES (Uses)
(polyalkyleneguanidine salt-contg. disinfecting detergents)

L11 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:636742 CAPLUS

DOCUMENT NUMBER: 137:170970

TITLE: Polyhexamethyleneguanidine salt-treated
antibacterial fibers

INVENTOR(S): Son, Son Won; Ju, Hong Shin; Kitamura, Koji; Otsuki,
Toru; Suyama, Tomiyoshi

PATENT ASSIGNEE(S): Daiwa Chemical Industries Co., Ltd., Japan; S K
Corporation

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|------|----------|-----------------|----------|
| JP 2002235282 | A2 | 20020823 | JP 2001-75029 | 20010209 |

PRIORITY APPLN. INFO.: JP 2001-75029 20010209

TI Polyhexamethyleneguanidine salt-treated antibacterial fibers

AB Title fibers contg. no heavy metals or halogens comprise polyhexamethylene
guanidine salt $[C_6H_{12}NHC(:NH)NH]_nA$, wherein $n = .gtoreq.1$
integer; A = nitric acid, formic acid, acetic acid, benzoic acid,
dehydroacetic acid, propionic acid, gluconic acid, sorbic acid, phosphoric
acid, fumaric acid, maleic acid, carbonic acid, sulfuric acid, or
p-toluenesulfonic acid. Thus, a cotton cloth was treated with 0.3%
poly(hexamethylene guanidine) phosphate to give an antibacterial
cotton cloth showing good antibacterial effect initially and after 10
times washing.

IT Textiles

(cotton; prepn. of polyhexamethyleneguanidine salt-treated
antibacterial fibers)

IT Polyamide fibers, uses

Polyester fibers, uses

RL: BUU (Biological use, unclassified); TEM (Technical or engineered
material use); BIOL (Biological study); USES (Uses)

(fabrics; prepn. of polyhexamethyleneguanidine salt-treated
antibacterial fibers)

IT Antibacterial agents

(prepn. of polyhexamethyleneguanidine salt-treated
antibacterial fibers)

IT Fibers

RL: BUU (Biological use, unclassified); TEM (Technical or engineered
material use); BIOL (Biological study); USES (Uses)

(prepn. of polyhexamethyleneguanidine salt-treated
antibacterial fibers)

IT Polyamines

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
(Uses)

(salts, antibacterial agents; prepn. of polyhexamethyleneguanidine
salt-treated antibacterial fibers)

IT 89697-78-9, Polyhexamethylene guanidine phosphate

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
(Uses)

(antibacterial agents; prepn. of polyhexamethyleneguanidine

salt-treated antibacterial fibers)

L11 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:499303 CAPLUS

DOCUMENT NUMBER: 137:371403

TITLE: Phosphorus-Containing Salts of
Polyhexamethyleneguanidinium for Protection of Metals
from Corrosion, Biological Overgrowing, and Salt
Deposition

AUTHOR(S): Antonik, L. M.; Lopyrev, V. A.; Korchevin, N. A.;
Tomin, V. P.

CORPORATE SOURCE: Siberian Division, Favorskii Institute of Chemistry,
Russian Academy of Sciences, Irkutsk, Russia

SOURCE: Russian Journal of Applied Chemistry (Translation of
Zhurnal Prikladnoi Khimii) (2002), 75(2), 257-260
CODEN: RJACEO; ISSN: 1070-4272

PUBLISHER: MAIK Nauka/Interperiodica Publishing

DOCUMENT TYPE: Journal

LANGUAGE: English

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ST polyhexamethyleneguanidinium **phosphate** anticorrosive coating
metal biol overgrowing **salt** deposition; bactericidal coating
polyhexamethyleneguanidinium **phosphate**

IT 89697-78-9P, **Polyhexamethyleneguanidine phosphate**

103728-45-6P, Guanidine carbonate-hexamethylenediamine copolymer

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or
engineered material use); PREP (Preparation); USES (Uses)

(prepn. and performance of polyhexamethyleneguanidinium **salts**
for protection of metals from corrosion, biol. overgrowing, and
salt deposition)

L11 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:492445 CAPLUS

DOCUMENT NUMBER: 137:326069

TITLE: method of preparing disinfecting agent with improved
stability and reduced toxicity by hexamethylenediamine
melt condensation with guanidine derivatives and
product purification

INVENTOR(S): Lipovich, V. G.; Lipovich, T. V.; Sedishev, I. P.

PATENT ASSIGNEE(S): Polyanov, Oleg Mstislavovich, Russia; Petrochenko,
Aleksandr Anatol'evich

SOURCE: Russ., No pp. given

CODEN: RUXXE7

DOCUMENT TYPE: Patent

LANGUAGE: Russian

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|-----------|-----------|--|----------|
| ----- | --- | ----- | ----- | ----- |
| RU 2170743 | C1 | 20010720 | RU 2000-107199 | 20000324 |
| PRIORITY APPLN. INFO.: | | | RU 2000-107199 | 20000324 |
| IT 1310-58-3, Potassium hydroxide, reactions | | | 1310-73-2, Sodium hydroxide, reactions | |
| RL: RCT (Reactant); RACT (Reactant or reagent) | | | | |
| (for polyhexamethyleneguanidine hydrochloride neutralization; | | | | |
| method of prepg. disinfecting agent with improved stability and reduced | | | | |
| toxicity by hexamethylenediamine melt condensation with guanidine | | | | |
| derivs. and product purifn.) | | | | |
| IT 7558-79-4, Disodium hydrophosphate | | 7558-80-7 | 7601-54-9, Sodium | |
| phosphate | 7783-28-0 | | | |
| RL: RCT (Reactant); RACT (Reactant or reagent) | | | | |

(in **polyhexamethyleneguanidine** hydrochloride transformation to **phosphate**; method of prepg. disinfecting agent with improved stability and reduced toxicity by hexamethylenediamine melt condensation with guanidine **derivs.** and product purifn.)

L11 ANSWER 6 OF 11 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:113105 CAPLUS
DOCUMENT NUMBER: 136:162718
TITLE: Poly(hexamethyleneguanidine) salt-containing
antibacterial odorless detergents with reduced skin
irritation for prevention of food poisoning
INVENTOR(S): Son, Son Uon; Ju, Hong Shin; Kitamura, Koji; Tsurii,
Takayuki; Suyama, Tomiyoshi
PATENT ASSIGNEE(S): Daiwa Chemical Industries Co., Ltd., Japan; S K
Corporation
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|--|-------------|----------------------|-----------------|-------------|
| | JP 2002047111 | A2 | 20020212 | JP 2000-258164 | 20000726 |
| PRIORITY APPLN. INFO.: | | | | JP 2000-258164 | 20000726 |
| ST | antibacterial polyhexamethyleneguanidine | | detergent prevention | | |
| IT | 89697-78-9, Poly(hexamethyleneguanidine) phosphate | | | 141655-19-8 | |
| | 217642-56-3 | 393861-25-1 | 393861-26-2 | 394204-92-3 | 394204-94-5 |
| | 394204-97-8 | 394204-99-0 | 394205-04-0 | 394205-06-2 | 394205-07-3 |
| | 394205-11-9 | 397844-26-7 | | | |
| RL: | BSU (Biological study, unclassified); BUU (Biological use, unclassified); NUU (Other use, unclassified); BIOL (Biological study); | | | | |
| USES (Uses) | (poly(hexamethyleneguanidine) salt -contg. antibacterial odorless detergents with reduced skin irritation for prevention of food poisoning) | | | | |

L11 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:98927 CAPLUS
DOCUMENT NUMBER: 136:152628
TITLE: Polyhexamethylene guanidine salt-treated antibacterial
fiber
INVENTOR(S): Son, Son Won; Ju, Hong Shin; Kitamura, Koji; Otsuki,
Toru; Suyama, Tomiyoshi
PATENT ASSIGNEE(S): Daiwa Chemical Industries Co., Ltd., Japan; S K
Corporation
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|---|------|----------|-----------------|----------|
| | JP 2002038373 | A2 | 20020206 | JP 2000-258163 | 20000726 |
| PRIORITY APPLN. INFO.: | | | | JP 2000-258163 | 20000726 |
| AB | The fiber is prepd. by treating a fiber with a polyhexamethyleneguanidine salt having formula of (C ₆ H ₁₂ NHC(NH)NH) _n .A (n .gtoreq.1 integer; A = nitric acid, formic acid, acetic acid, benzoic acid, dehydroacetic acid, propionic acid, gluconic | | | | |

acid, sorbic acid, phosphoric acid, fumaric acid, maleic acid, carbonic acid, sulfuric acid, and p-toluenesulfonic acid). Thus, a fiber was prepd. by immersing a cotton fabric in a 0.25% aq. soln. of

polyhexamethyleneguanidine phosphate and drying.

ST **polyhexamethyleneguanidine phosphate** antibacterial fiber; acid **salt polyhexamethyleneguanidine** antibacterial agent

IT 89697-78-9, **Polyhexamethyleneguanidine phosphate**

141655-19-8 217642-56-3 393861-25-1 393861-26-2 394204-92-3

394204-94-5 394204-97-8 394204-99-0 394205-01-7 394205-04-0

394205-06-2 394205-07-3 394205-11-9

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(polyhexamethylene guanidine **salt**-treated antibacterial fiber)

L11 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:94188 CAPLUS

DOCUMENT NUMBER: 136:114233

TITLE: Preparation of antimicrobial wet wipers

INVENTOR(S): Son, Son Won; Ju, Hong Shin; Minemura, Kimie; Suyama, Tomiyoshi

PATENT ASSIGNEE(S): Daiwa Chemical Industries Co., Ltd., Japan; S K Corporation

SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|------|----------|-----------------|----------|
| JP 2002034828 | A2 | 20020205 | JP 2000-258162 | 20000726 |

PRIORITY APPLN. INFO.: JP 2000-258162 20000726

AB Wet wipers are treated with poly(hexamethyleneguanidine) **salts** for control of bacteria and fungi. Nonwoven fabric was treated with an aq. soln. of poly(hexamethyleneguanidine) **phosphate**.

ST wiper bacteria fungi control **polyhexamethyleneguanidine salt**

L11 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:690131 CAPLUS

DOCUMENT NUMBER: 135:231426

TITLE: Method for disinfecting water from therapeutic and swimming pools

INVENTOR(S): Efimov, K. M.; Gembitskii, P. A.; Vointseva, I. I.; Zotova, V. I.

PATENT ASSIGNEE(S): Institut Ekhologo-Tekhnologicheskikh Problem, Russia

SOURCE: Russ., No pp. given

CODEN: RUXXE7

DOCUMENT TYPE: Patent

LANGUAGE: Russian

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|----------|-----------------|----------|
| RU 2145307 | C1 | 20000210 | RU 1999-112325 | 19990618 |

PRIORITY APPLN. INFO.: RU 1999-112325 19990618

AB Disinfecting procedure involves treatment with (a)

polyhexamethyleneguanidine phosphate salt

formed in reaction of exchange decompn. of polyhexamethyleneguanidinium chloride with 40% aq. soln. of diammonium **phosphate**, or (b)

polyhexamethyleneguanidinium **phosphate**, or (c) **phosphate salt** of copolymers of **polyhexamethyleneguanidine** with higher monoamines. Flow- or recycle- type pool water is treated with above at 0.5-1.5 mg/L. In particular, recycle-type pool water is passed through layer of clinoptilolite treated with mentioned reagent to achieve its concn. 1-2%. Increased reliability of antiseptic protection of pool water and reduced toxicity of reagent including its allergic activity is obtained.

ST **polyhexamethyleneguanidine phosphate** swimming pool water disinfection

IT 31961-54-3D, **Polyhexamethyleneguanidine, phosphate salts**, copolymers with higher monoamines

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(method for disinfecting water from therapeutic and swimming pools)

L11 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:351312 CAPLUS

DOCUMENT NUMBER: 132:344445

TITLE: Synergistic biocidal composition.

INVENTOR(S): Choi, Ki-Seung; Kim, Jin-Man; Park, Jeong-Ho; Cho, Myung-Ho; Hahn, Soon-Jong

PATENT ASSIGNEE(S): SK Chemicals, S. Korea

SOURCE: PCT Int. Appl., 17 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|------|----------|-----------------|------------|
| WO 2000028823 | A1 | 20000525 | WO 1999-KR687 | 19991116 |
| W: AU, CA, CN, JP, US | | | | |
| RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | |
| KR 2000032593 | A | 20000615 | KR 1998-49095 | 19981116 |
| EP 1133231 | A1 | 20010919 | EP 1999-972072 | 19991116 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI | | | | |
| AU 751719 | B2 | 20020822 | AU 2000-11867 | 19991116 |
| JP 2002529482 | T2 | 20020910 | JP 2000-581888 | 19991116 |
| PRIORITY APPLN. INFO.: | | | KR 1998-49095 | A 19981116 |
| | | | WO 1999-KR687 | W 19991116 |

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

AB The title compn. comprises a 3-isothiazolone I (R = H or Cl) and **polyhexamethyleneguanidine phosphate** [(CH₂)₆NHC(:NH)NH]_m.nH₃PO₄ (m = 4-7; n = 1-14). The biocide compn. not only does not corrode metal, but also has a high instant sterilizing capability, a wide antibiotic spectrum, and superior antiseptic effects. It is usable as a biocide for cooling waters, paints, latexes, cosmetics, emulsions, textiles, leather metal processing fluids and paper industry.

ST synergism biocide isothiazolone **deriv**
polyhexamethyleneguanidine phosphate

IT Algicides

Antibacterial agents

Fungicides

(industrial, synergistic; compns. contg. isothiazolone **deriv.** and **polyhexamethyleneguanidine phosphate**)

IT Paper

(manuf.; microbicidal compns. contg. isothiazolone **deriv.** and **polyhexamethyleneguanidine phosphate** for)

IT Lubricating oils
(metalworking; microbicidal treatment by compns. contg. isothiazolone
**deriv. and polyhexamethyleneguanidine
phosphate**)

IT Cooling water
Cosmetics
Emulsions
Latex
Paints
Textiles
(microbicidal treatment by compns. contg. isothiazolone **deriv
. and polyhexamethyleneguanidine phosphate**)

IT Biocides
(synergistic; compn. contg. isothiazolone **deriv. and
polyhexamethyleneguanidine phosphate**)

IT 2682-20-4D, mixts. with **polyhexamethyleneguanidine phosphate**
26172-55-4D, mixts. with **polyhexamethyleneguanidine phosphate**
31961-54-3D, **Polyhexamethyleneguanidine, phosphates,**
mixts. with isothiazolone **derivs.**
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
(Uses)
(synergistic biocidal compns.)

L11 ANSWER 11 OF 11 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1986:200206 CAPLUS

DOCUMENT NUMBER: 104:200206

TITLE: **Polyhexamethyleneguanidine phosphate**
injections with antitumor activity

INVENTOR(S): Lulle, I.; Lidaks, M.; Paegle, R.; Zidermane, A.;
Kravchenko, I. M.; Gilev, A. P.; Kagan, T. I.;
Gembitskii, P. A.; Simkhovich, B. Z.

PATENT ASSIGNEE(S): Institute of Organic Synthesis, Academy of Sciences,
Latvian S.S.R., USSR

SOURCE: Can., 12 pp.
CODEN: CAXXA4

DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|----------|
| ----- | --- | ----- | ----- | ----- |
| CA 1194802 | A1 | 19851008 | CA 1982-413032 | 19821007 |
| PRIORITY APPLN. INFO.: | | | CA 1982-413032 | 19821007 |

TI **Polyhexamethyleneguanidine phosphate** injections with antitumor
activity

AB **Polyhexamethyleneguanidine phosphate,**
 $R(CH_2)_6[NHC(:NH)NH(CH_2)_6]_nR_1.(H_3PO_4)_{n+2}$, [R, R1 = NH2, H2NC(:NH)NH; n =
2-5], has antitumor activity and may be used for the treatment of
gastrointestinal and mammary cancer. The compd. has an LD50 in mice of 70
mg/kg, and inhibits the synthesis of DNA, RNA, and protein by tumor cells
in vitro, probably by affecting transport of precursors. Equimolar amts.
of hexamethyleneguanidine and guanidine-HCl were polymd. at
160-170.degree. for 23 h to produce **polyhexamethyleneguanidine
-HCl**, which was dissolved in EtOH, mixed with 1 equiv. NaOEt, NaCl was
removed by filtration, and H3PO4 was added to the filtrate.
Polyhexamethyleneguanidine phosphate was filtered, repptd. from aq
EtOH, washed, and dried. The antitumor agent is preferably used in the
form of 1.5% injections.

ST **polyhexamethyleneguanidine phosphate** antitumor

IT Neoplasm inhibitors
(**polyhexamethyleneguanidine phosphate**)

IT 102265-78-1P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and conversion of, to **phosphate salt**)

=> d his full

(FILE 'HOME' ENTERED AT 11:47:58 ON 27 JUN 2003)

FILE 'REGISTRY' ENTERED AT 11:48:44 ON 27 JUN 2003

E 3-ISOTHIAZOLONE/CN

L1 1 SEA ABB=ON PLU=ON 3-ISOTHIAZOLONE/CN
D L1

FILE 'CAPLUS' ENTERED AT 11:49:44 ON 27 JUN 2003

L2 251 SEA ABB=ON PLU=ON 3-ISOTHIAZOLONE

L3 313 SEA ABB=ON PLU=ON L1

FILE 'REGISTRY' ENTERED AT 11:50:25 ON 27 JUN 2003

E POLYHEXAMETHYLENEBIGUANIDINE/CN

E POLYHEXAMETHYLENEGUANIDINE/CN

L4 1 SEA ABB=ON PLU=ON POLYHEXAMETHYLENEGUANIDINE/CN
D L4

FILE 'CAPLUS' ENTERED AT 11:51:28 ON 27 JUN 2003

L5 92 SEA ABB=ON PLU=ON L4

L6 1 SEA ABB=ON PLU=ON L4 (P) (PHOSPHATE OR PHOSPHORIC) (5A)
SALT
D L6 IBIB KWIC

L7 0 SEA ABB=ON PLU=ON L3 AND L5

L8 51 SEA ABB=ON PLU=ON (L3 OR L5) (P) (ANTIBACTERIAL OR BIOCIDAL
OR BACTERICIDAL OR FUNGICIDAL OR ANTI-PROTOZOAL OR ANTI-ALGAL
OR ANTIMICROBIAL)

L9 4 SEA ABB=ON PLU=ON L8 AND (COMBINATION OR MIXTURE OR SYNERGY
OR ADDITIVE) (P) (L3 OR L5)

L10 10 SEA ABB=ON PLU=ON L8 AND (COMBINATION OR MIXTURE OR SYNERGY
OR ADDITIVE) (P) (ANTIMICROBIAL OR ANTIBACTERIAL OR ANTIFUNGAL
OR BIOCIDAL OR BACTERICIDAL OR ANTI-PROTOZOAL OR ANTI-ALGAL)
D 10 IBIB KWIC 1-
D L8 IBIB 1-

L11 11 SEA ABB=ON PLU=ON (POLYHEXAMETHYLENEGUANIDINE) AND (SALT OR
DERIVATIVE) (P) (PHOSPHATE OR PHOSPHORIC OR PHOSPHOROUS)
D L11 IBIB KWIC 1-

FILE 'REGISTRY' ENTERED AT 12:49:11 ON 27 JUN 2003

E ALEXIDINE

L12 6 SEA ABB=ON PLU=ON ALEXIDINE/BI
D L12

E CHLORHEXIDINE

L13 45 SEA ABB=ON PLU=ON CHLORHEXIDINE/BI
D L13

FILE 'CAPLUS' ENTERED AT 12:50:32 ON 27 JUN 2003

L14 100 SEA ABB=ON PLU=ON (CHLORHEXIDINE OR ALEXICIDINE OR POLYAMINOP
ROPYLGUANIDE) (P) (PHOSPHATE OR PHOSPHORUS)

L15 93 SEA ABB=ON PLU=ON (CHLORHEXIDINE OR ALEXICIDINE OR POLYAMINOP
ROPYLGUANIDE) (P) (PHOSPHATE)

L16 2 SEA ABB=ON PLU=ON (CHLORHEXIDINE OR ALEXICIDINE OR POLYAMINOP
ROPYLGUANIDE) (5A) (PHOSPHATE) (5A) (SALT OR DERIVATIVE)
D L16 IBIB KWIC 1-

L17 19 SEA ABB=ON PLU=ON (CHLORHEXIDINE OR ALEXICIDINE OR POLYAMINOP
ROPYLGUANIDE) (5A) (PHOSPHATE)
D L17 IBIB KWIC 1-